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## **ANNEX G CHEMICAL COUNTERMEASURES**

### **APPENDIX I DISPERSANTS**

#### **BACKGROUND**

The use of chemical dispersants to assist in the control of oil spills at sea has been under intense study since the late 1960's and early 1970's. At that time, there were several instances of indiscriminate use of highly toxic chemical agents in attempts to disperse spilled oil. Since then, products lacking hydrocarbon solvents have been developed that are water-based or water-soluble and generally are less toxic. In some instances, these products have been intensely studied, registered on the National Contingency Plan (NCP) Product Schedule, and licensed by the State Water Resources Control Board (SWRCB) for use in California waters. The effectiveness of dispersants is still a hotly debated topic; methods to evaluate dispersant efficacy remain contentious as do the laboratory results on dispersant effectiveness. The use of dispersants in specific situations, however, may afford an appropriate environmental trade-off when compared to their non-use.

#### **REGIONAL PHILOSOPHY**

The primary objective of oil spill abatement and cleanup is to reduce the effect of spilled oil on the environment. Physical removal is the preferred method. However, mechanical recovery may be limited by equipment capability, weather and sea conditions, and spill magnitude. Use of chemical oil spill cleanup agents may be considered when the preferred recovery techniques are inadequate and the environmental benefit of chemical use outweighs its adverse effects.

#### **GUIDELINES**

The NCP, Section 300.910, authorizes the use of dispersants on all waters threatened by the release or discharge of oil. The following guidelines consolidate existing Federal and State policies and streamline the approval process without jeopardizing the proper environmental considerations of dispersant and other chemical use.

##### **(A) DECISION PROCESS**

The OSC shall adhere to the following:

##### **(1) AREAS**

###### **(a) Zone 1**

Shoreward of the baseline from which the territorial sea is measured: The OSC will obtain approval from the EPA representative to the RRT and the affected state(s) (California, Nevada, and/or Arizona). Whenever fish or wildlife resources may be affected, the EPA and State representative to the RRT will consult with the natural resource trustee(s).

###### **(b) Zone 2**

Seaward of the baseline to 3 nautical miles: Coast Guard OSC will obtain approval from the EPA representative to the RRT and the California Department of Fish and Game (CDFG) representing the State of California. Whenever fish or wildlife resources may be affected, the EPA and State representative to the RRT will consult with the DOI and DOC natural resource Trustees, including Sanctuary Managers as applicable.

(c) Zone 3

Beyond 3 miles: Coast Guard OSC will obtain approval from the EPA representative to the RRT. Concurrence with the CDFG, representing the State of California is necessary when navigable waters under the jurisdiction of the State of California may be threatened by the release or discharge. In all cases, the State of California will be notified and consulted prior to the use of dispersants. Whenever significant fish or wildlife resources may be affected, the EPA and State representative to the RRT will consult with the DOC and DOI natural resource trustees, including Sanctuary Managers as applicable.

**(2) DOCUMENTATION/TECHNICAL ASSISTANCE**

EPA, affected state(s), DOI, and DOC will each have a representative available to coordinate data collection and interpretation and to consult with the OSC.

**(3) AUTHORIZED DISPERSANTS AND CHEMICALS**

Only dispersants and chemical accepted by the EPA and the CDFG representing the State of California shall be used, except in Zone 3 where the EPA accepted list is preeminent. The application and use of Oil Spill Cleanup Agents in California shall comply with Article Three (Sections 2332 through 2336) of California Code of Regulation, Title 23.

**(4) MONITORING**

The application process and results must be recorded visually. This can be accomplished using film or video footage made from a vessel or from the air. Visual observations can also be made by a trained observer. However, it is often difficult even for a trained observer to distinguish between oil dispersion and oil herding. If possible, localized monitoring should be undertaken to determine the effectiveness of dispersion into the water (e.g., measurement of oil/dispersant mixtures into the water column). Efforts should be made to distinguish between effective dispersion and simple herding of oil. Filming should be done without causing delay to the dispersant application activity.

**(5) HAZARD TO HUMAN LIFE**

The safety of human life is paramount to other considerations. The OSC (or, for spills originating from and within 500 meters of an offshore platform, the designated representative from the Minerals Management Service on the OSC's staff) may authorize the use of any dispersant, anywhere, and at any time when necessary to prevent or substantially reduce hazards to human life. The OSC is to inform the EPA RRT representative and, as appropriate, the RRT representatives from the affected state(s) and, when practicable, the DOC/DOI natural resource trustees of the use of a product as soon as possible.

**(6) HAZARD TO THE ENVIRONMENT**

Dispersants should not be used unless they can be used effectively and efficiently with an articulable justification that the environmental impact of the spill will be lessened by their use.

## **(B) DOCUMENTATION**

The Dispersant Checklist (Figure G-I-1) will be used by the OSC and staff to permanently record the decision to use or not to use dispersants for a specific incident. The SSC will assemble this information, with input from resource agencies and other sources. A single checklist will be given to the OSC to assist in the evaluation of the dispersibility of the oil, the potential effects on the wildlife habitat and resources, and the degree of mitigation using dispersants versus mechanical removal. Each agency resource trustee representative will be the point of contact for their constituency; the SSC will be the point of contact for all not represented.

### **QUICK APPROVAL ZONE (QAZ) PLAN**

The QAZ Plan: The 11th Coast Guard District and Region IX of the EPA along with the State of California and the other members of the Regional Response Team have instituted the QAZ Plan. This plan details the procedures that the On Scene Coordinator (OSC) would employ in order to receive an expeditious dispersant decision. Generally speaking the QAZ is defined as the offshore waters of California that are at a safe distance from environmentally sensitive areas. The QAZ is based on the concept that the pelagic environment may be relatively less sensitive to the application of chemical dispersants while at the same time an oil slick, far offshore, could still potentially threaten susceptible nearshore habits (e.g. marine sanctuaries, wetlands, etc.). A timely response to an offshore threat could prove very beneficial in the long term. Copies of this plan can be gotten from the 11th Coast Guard District or OSPR. This accelerated review process has been instituted so that Coast Guard OSC's can mobilize dispersant resources in a timely fashion. Spills in the offshore environment may require a greater amount of logistical support due to their distance from staging areas. Longer flights to the slick constitute greater fuel requirements, resulting in a smaller dispersant payload that can be transported, which may lead to greater number of sorties and/or more aircraft.

## DISPERSANT CHECKLIST

### BASIC DISPERSANT CONSIDERATIONS

- o viscosity less than 2000 cs (**Yes or No**)
- o pour point less than water temperature (**Yes or No**)
- o adequate energy present in the sea surface (**Yes or No**)
- o depth of water greater than 200 feet (**Yes or No**)
- o more than 2 hours drift away from sanctuary (**Yes or No**)

### SPILL DATA/INCIDENT INFORMATION

CAUSE (SPECIFIC): \_\_\_\_\_  
\_\_\_\_\_

DATE/TIME: \_\_\_\_\_

LOCATION: \_\_\_\_\_  
\_\_\_\_\_

VOLUME AND TYPE OF RELEASE (Cont., Intermittent): \_\_\_\_\_  
\_\_\_\_\_

POTENTIAL VOLUME TO BE RELEASED: \_\_\_\_\_  
\_\_\_\_\_

CONFIDENCE IN DATA (high, medium, low): \_\_\_\_\_

### CHARACTERISTICS OF SPILLED OIL

OIL TYPE/NAME: \_\_\_\_\_

SPECIFIC GRAVITY: \_\_\_\_\_ FLASH POINT: \_\_\_\_\_

POUR POINT: \_\_\_\_\_ VISCOSITY: \_\_\_\_\_

%AROMATICS: \_\_\_\_\_ %SATURATES: \_\_\_\_\_

%ASPHALTENES: \_\_\_\_\_

**DISPERSANT CHECKLIST, PAGE 2. WEATHER AND WATER CONDITIONS/FORECAST (48HR)**

WATER TEMP: \_\_\_\_\_ AIR TEMP: \_\_\_\_\_

CURRENT INFO: \_\_\_\_\_ WIND SPEED: \_\_\_\_\_

SALINITY: \_\_\_\_\_ WIND DIRECTION: \_\_\_\_\_

WATER DEPTH: \_\_\_\_\_ SEA STATE: \_\_\_\_\_

TIDE INFO: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

**OIL TRAJECTORY INFORMATION (48HR)**

SURFACE AREA OF SLICK: \_\_\_\_\_

24HR SLICK TRAJECTORY: \_\_\_\_\_

48HR SLICK TRAJECTORY: \_\_\_\_\_

24HR DISPERSED OIL TRAJECTORY: \_\_\_\_\_

48HR DISPERSED OIL TRAJECTORY: \_\_\_\_\_

EXPECTED LANDFALL (LOCATION/TIME): \_\_\_\_\_

COMMENTS: \_\_\_\_\_

**HABITAT TYPE/AREA OF IMPACT:**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

**DISPERSANT CHARACTERISTICS**

	PRODUCT 1	PRODUCT 2	PRODUCT 3
NAME:	-----	-----	-----
MANUFACTURER:	-----	-----	-----
EPA LISTED:	-----	-----	-----
STATE LICENSED:	-----	-----	-----
STOCKPILE LOCATION:	-----	-----	-----
POINT OF CONTACT	-----	-----	-----
WHEN AVAILABLE:	-----	-----	-----
AMOUNT AVAILABLE	-----	-----	-----
AMOUNT NEEDED	-----	-----	-----
AMOUNT ON HAND	-----	-----	-----
TOXICITY:	-----	-----	-----
TYPE (CONCENTRATE/MIX)	-----	-----	-----
PHYSICAL REACTIVITY:	-----	-----	-----
APPLICABILITY ON OIL	-----	-----	-----
EFFICIENCY(% PROJECTED)	-----	-----	-----
APPLICATION MEANS:	-----	-----	-----
POSITIVE DOSAGE CONTROL	-----	-----	-----
DOSAGE RATE SETTINGS	-----	-----	-----
DOSAGE CHARTS AVAILABLE	-----	-----	-----

**DISPERSANT APPLICATION INFORMATION/EVALUATION:**

PROPOSED DISPERSANT APPLICATION PLAN:\_\_\_\_\_

**DISPERSANT APPLICATION INFORMATION (CONTINUED)**

EQUIPMENT PROPOSED FOR USE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ARE RESPONDERS ADEQUATELY TRAINED: \_\_\_\_\_

LOCATION OF AREA TO BE TREATED: \_\_\_\_\_  
\_\_\_\_\_

SCHEDULE OF DISPERSANT OPERATIONS: \_\_\_\_\_  
\_\_\_\_\_

WHAT WILL THE SLICK/WEATHER CONDITIONS BE AT THE TIME THE DISPERSANT IS APPLIED: \_\_\_\_\_  
\_\_\_\_\_

IS THE VEHICLE FOR APPLICATION EFFICIENT AND PROPER GIVEN THE CONDITIONS STATED ABOVE: \_\_\_\_\_

ARE MONITORING SCHEMES IN PLACE OR READILY AVAILABLE: \_\_\_\_\_

**WITNESSES TO APPLICATION**

NAMES	DATE/TIME
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

PLATFORM USED: \_\_\_\_\_  
\_\_\_\_\_

OBSERVATION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**VIDEO/PHOTO DOCUMENTATION RECORD**

IN CHARGE: \_\_\_\_\_ IN CUSTODY OF: \_\_\_\_\_

CASSETTE(S) NUMBER \_\_\_\_\_ VIDEO EQUIPMENT TYPE \_\_\_\_\_

ROLL(S) NUMBER \_\_\_\_\_ CAMERA TYPE \_\_\_\_\_



## **BIOREMEDIATION CHECKLIST**

### **SPILL DATA/INCIDENT INFORMATION**

CAUSE (SPECIFIC): \_\_\_\_\_

DATE/TIME: \_\_\_\_\_

LOCATION: \_\_\_\_\_

VOLUME AND TYPE OF RELEASE (Cont., Intermittent): \_\_\_\_\_

POTENTIAL VOLUME TO BE RELEASED: \_\_\_\_\_

CONFIDENCE IN DATA (high, medium, low): \_\_\_\_\_

### **CHARACTERISTICS OF SPILLED OIL**

OIL TYPE/NAME: \_\_\_\_\_

SPECIFIC GRAVITY: \_\_\_\_\_ FLASH POINT: \_\_\_\_\_

POUR POINT: \_\_\_\_\_ VISCOSITY: \_\_\_\_\_

%AROMATICS: \_\_\_\_\_ %SATURATES: \_\_\_\_\_

%ASPHALTENES: \_\_\_\_\_

### **WEATHER AND WATER CONDITIONS/FORECAST (48HR)**

WATER TEMP: \_\_\_\_\_ AIR TEMP: \_\_\_\_\_

CURRENT INFO: \_\_\_\_\_ WIND SPEED: \_\_\_\_\_

SALINITY: \_\_\_\_\_ WIND DIRECTION: \_\_\_\_\_

WATER DEPTH: \_\_\_\_\_ SEA STATE: \_\_\_\_\_

TIDE INFO: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

**BIOREMEDIATION CHECKLIST, PAGE 2.**

HABITAT TYPE/AREA OF IMPACT:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_

**BIOREMEDIATION CHARACTERISTICS**

	PRODUCT 1	PRODUCT 2	PRODUCT 3
NAME:	_____	_____	_____
MANUFACTURER:	_____	_____	_____
EPA LISTED:	_____	_____	_____
STATE LICENSED:	_____	_____	_____
STOCKPILE LOCATION:	_____	_____	_____
POINT OF CONTACT	_____	_____	_____
WHEN AVAILABLE:	_____	_____	_____
AMOUNT AVAILABLE	_____	_____	_____
AMOUNT NEEDED	_____	_____	_____
AMOUNT ON HAND	_____	_____	_____
TOXICITY:	_____	_____	_____
TYPE (CONCENTRATE/MIX)	_____	_____	_____
PHYSICAL REACTIVITY:	_____	_____	_____
APPLICABILITY ON OIL	_____	_____	_____
EFFICIENCY(% PROJECTED)	_____	_____	_____
APPLICATION MEANS:	_____	_____	_____
POSITIVE DOSAGE CONTROL	_____	_____	_____
DOSAGE RATE SETTINGS	_____	_____	_____
DOSAGE CHARTS AVAILABLE	_____	_____	_____

**BIOREMEDIATION APPLICATION INFORMATION/EVALUATION:**

PROPOSED BIOREMEDIATION APPLICATION PLAN:\_\_\_\_\_

---

**BIOREMEDIATION APPLICATION INFORMATION (CONTINUED)**

EQUIPMENT PROPOSED FOR USE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

RESPONDERS ADEQUATELY TRAINED: \_\_\_\_\_

LOCATION OF AREA TO BE TREATED: \_\_\_\_\_  
\_\_\_\_\_

SCHEDULE OF BIOREMEDIATION OPERATIONS: \_\_\_\_\_  
\_\_\_\_\_

WHAT WILL THE WEATHER CONDITIONS BE AT THE TIME THE BIOREMEDIATION IS APPLIED:  
-----  
\_\_\_\_\_

IS THE VEHICLE FOR APPLICATION EFFICIENT AND PROPER GIVEN THE CONDITIONS STATED ABOVE: \_\_\_\_\_

ARE MONITORING SCHEMES IN PLACE OR READILY AVAILABLE: \_\_\_\_\_

**WITNESSES TO THE APPLICATION**

NAMES	DATE/TIME
_____	_____
_____	_____
_____	_____
_____	_____
-----	-----

PLATFORM USED: \_\_\_\_\_  
\_\_\_\_\_

OBSERVATION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**VIDEO/PHOTO DOCUMENTATION RECORD**

IN CHARGE: \_\_\_\_\_ IN CUSTODY OF: \_\_\_\_\_

CASSETTE(S) NUMBER \_\_\_\_\_ VIDEO EQUIPMENT TYPE \_\_\_\_\_

ROLL(S) NUMBER \_\_\_\_\_ CAMERA TYPE \_\_\_\_\_

**IN-SITU BURNING CHECKLIST, PAGE 2.**

HABITAT TYPE/AREA OF IMPACT:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**IN-SITU BURNING INFORMATION/EVALUATION:**

PROPOSED IN-SITU BURNING OPERATION PLAN: \_\_\_\_\_  
\_\_\_\_\_

EQUIPMENT/METHOD PROPOSED FOR USE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

RESPONDERS ADEQUATELY TRAINED: \_\_\_\_\_

LOCATION OF AREA TO BE TREATED: \_\_\_\_\_  
\_\_\_\_\_

SCHEDULE OF IN-SITU BURNING OPERATIONS: \_\_\_\_\_  
\_\_\_\_\_

WHAT WILL THE WEATHER CONDITIONS BE AT THE TIME THE IN-SITU BURNING OPERATION IS APPLIED: \_\_\_\_\_  
\_\_\_\_\_

IS THE VEHICLE FOR APPLICATION EFFICIENT AND PROPER GIVEN THE CONDITIONS STATED ABOVE: \_\_\_\_\_  
\_\_\_\_\_

ARE MONITORING SCHEMES IN PLACE OR READILY AVAILABLE: \_\_\_\_\_

**IN-SITU BURNING CHECKLIST, PAGE 3**

**WITNESSES TO THE APPLICATION**

NAMES

DATE/TIME

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-----  
-----  
-----

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-----  
-----  
-----  
-----

PLATFORM USED: \_\_\_\_\_

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OBSERVATION: \_\_\_\_\_

-----

-----

**VIDEO/PHOTO DOCUMENTATION RECORD**

IN CHARGE: \_\_\_\_\_ IN CUSTODY OF: \_\_\_\_\_

CASSETTE(S) NUMBER \_\_\_\_\_ VIDEO EQUIPMENT TYPE \_\_\_\_\_

ROLL(S) NUMBER \_\_\_\_\_ CAMERA TYPE \_\_\_\_\_

## **APPENDIX II BIOREMEDIATION**

### **BACKGROUND**

Bioremediation is a treatment technology that enhances existing biological processes to accelerate the decomposition of petroleum hydrocarbons and some hazardous wastes. Bioremediation has been used extensively in waste water treatment of spilled oil. The most extensive field research efforts have been the shoreline treatment studies in Alaska following the Valdez incident. This research suggested that shoreline treatment by nutrient enhancement significantly increased degradation rates of oil when compared to untreated shoreline areas. The benefits of bioremediation, however, have not been adequately demonstrated through field applications. Consequently, this technology should be considered more experimental than an accepted standard for cleanup of oil spills. The promise of bioremediation providing increased rates of oil degradation with minimal input of human effort to cleanup the spilled oil is attractive. However, the technology is time consuming, unproved in open water environments, and probably best suited to the treatment of specific types of shorelines and marsh habitats. At present, bioremediation should be viewed as a polishing agent for the final stages of cleanup rather than as a primary response tool - especially considering the slow rates of reaction to degrade the oil.

### **REGIONAL PHILOSOPHY**

The primary objective of oil spill abatement and cleanup is to reduce the effect of spilled oil on the environment. Physical removal is the preferred method. However, mechanical recovery may be limited by equipment capability, weather and sea conditions, and spill magnitude. In addition, efforts and equipment used for mechanical recovery may prove to be more destructive to the environment than the original contamination with oil. Based on the results of current research, and a general understanding of the principles of bioremediation, this technology should be used strictly as a shoreline remediation tool with a preference for nutrient enhancement without the introduction of indigenous and/or nonindigenous microbes.

### **GUIDELINES**

Section 300.910 of NCP authorizes the use of biological additives for the dispersion/abatement of oil spills. The product must be listed on the NCP Product Schedule and on the list of products licensed by the SWRCB for use in the State of California to be considered for use along the California coastline. The following guidelines consolidate existing Federal and State regulations and streamline the approval process.

#### **(A) DECISION PROCESS**

The OSC shall adhere to the following:

##### **(1) INLAND AND SHORELINE AREAS**

The OSC will obtain approval from the EPA and the California Department of Fish and Game (CDFG) representing the State of California. The EPA and State representative to the RRT shall consult with the DOI and DOC natural resource trustee(s). **Note:** In California, bioremediation products considered for use must be on California's list of approved products, or be incident specific approved by the State representative to the RRT.

##### **(2) DOCUMENTATION/TECHNICAL ASSISTANCE**

EPA, affected states(s), DOI, and DOC will each have a representative available to coordinate data collection and interpretation and to consult with the OSC.

### **(3) MONITORING:**

The application process and results must be recorded visually. This can be accomplished using film or video footage made from the shore or from the air. Visual observations can also be made by a trained observer. Filming should be done without causing delay to the bioremediation application activity.

### **(B) DOCUMENTATION**

The Bioremediation Checklist (Figure G-II-1) will be used by the OSC and staff to permanently record the decision to use or not to use bioremediation for a specific incident. Each agency resource trustee representative will be the point of contact for their constituency; the SSC will be the point of contact for all not represented.



## **APPENDIX III IN-SITU BURNING**

### **BACKGROUND**

The burning of oil in its original location (in-situ burning) to assist in the abatement of oil spills is not a new or an unproven oil spill response technology. The development of fire retardant boom (fire boom) and oil ignition methods/devices used in the burning of oil have recently come into existence, making in-situ burning a viable response technology. As an example, an in-situ test burn was conducted on the second day of the Exxon Valdez incident. Using two fishing vessels and 500 feet of fire boom, an estimated 15,000 to 30,000 gallons of crude oil were eliminated in 75 minutes. Using the lower estimate of 15,000 gallons encountered, and with a residual 300 gallons of unburned material left inside the boomed containment area, 98% of the oil encountered was eliminated. Of all current oil spill abatement methods, only in-situ burning can achieve results like these and at a fraction of the cost of typical oil spill cleanup techniques.

### **REGIONAL PHILOSOPHY**

The primary objective of oil spill abatement and cleanup is to reduce the effect of spilled oil on the environment. Physical removal and disposal is the preferred method. However, mechanical recovery may be limited by equipment capability, weather and sea states, storage and disposal problems, and spill magnitude. Use of in-situ burning may be considered by the OSC when the preferred recovery techniques are inadequate and in situ burning will lessen the environmental impacts of the spill.

### **GUIDELINES**

The National Contingency Plan, Section 300.910, authorizes the OSC, with the concurrence of the EPA representative to the RRT and, as appropriate, the concurrence of the State representative to the RRT with jurisdiction over navigable waters threatened by the release or discharge (of oil), and in consultation with the DOC and DOI natural resource trustees, when practicable, to authorize the use of in-situ burning on a case-by-case basis. The following guidelines consolidate existing Federal and State regulations, for the approval process without jeopardizing the proper environmental considerations of in-situ burning:

#### **(A) DECISION PROCESS**

Currently, California does not allow the burning of oil within the State or on State waters. California Health and Safety Code, Article 2, Section 41800 states that, “no person shall use open outdoor fires for the purpose of disposal or burning of petroleum wastes...”

In-situ burning can be used in the state of California and its waters by Federal preemption of California Health and Safety Code, Article 2, Section 41800. Federal preemption is possible only under specific circumstances. When preemption occurs, the OSC must obtain approval from EPA and State representative to the RRT. When appropriate and practicable, the EPA and State representative to the RRT shall consult the DOC and DOI natural resource trustees.

The OSC shall adhere to the following when in-situ burning is considering outside State waters:

#### **(1) BEYOND 3 MILES**

The OSC will obtain approval from the EPA representative to the RRT Concurrence from the State of California is necessary only when navigable waters under the jurisdiction of the State of California are threatened by the discharge of oil. In all cases, the State of California will be notified of the use of in-situ burning. When appropriate and practicable, the EPA representative

Marlen Supply, Inc. 23159 Kidder Street Hayward, CA 94545	Nokomis #3 (F-4) (AKA Improve Colloidal 10/1/95 Slick-A-Way Dispersant	Dispersant
OSA, INC. 8291 S. Sepulveda Blvd. #118 Los Angeles, CA 90054	OSA Oil Absorbent 2/1/99	Collecting
Parker Systems, Inc. P.O. Box 1652 Norfolk, VA 23501	Oil Snare 4/1/94	Collecting
R.B.H. Cybernetics (1970 Ltd.) Postal Station A	Graboil 2/1/97	Collecting
3M Occupational Health & Safety Products Div. 3M Center St. Paul, MN 55144	3M Brand Oil Sorbent 1/1/95	Collecting
Victoria, B.C. Canada Shell Oil Company One Shell Plaza P.O. Box 432D Houston, TX 77210	Shell Oil Herder 1/1/95	Collecting
Zorbite Corporation 612 Meyer Lane #8 Redondo Beach, CA 90278	Zorbite 10/1/94	Collecting

to the RRT shall consult with the DOC and DOI natural resource trustees, and Sanctuary Managers, if applicable.

## **(2) MONITORING**

The use and results of in-situ burning must be recorded visually. This can be accomplished using film or video footage made from a vessel or the air. Visual observations can also be made by a trained observer. Filming should be done without causing delay to the in-situ burning operation.

## **(B) DOCUMENTATION**

The In-Situ Burning Checklist (Figure G-III-1) will be used by the OSC and staff to permanently record the decision to use or not to use in-situ burning for a specific incident. Each agency resource trustee representative will be the point of contact for their constituency; the SSC will be the point of contact for all not represented.

## IN-SITU BURNING CHECKLIST

### SPILL DATA/INCIDENT INFORMATION

CAUSE (SPECIFIC): \_\_\_\_\_  
\_\_\_\_\_

DATE/TIME: \_\_\_\_\_

LOCATION: \_\_\_\_\_  
\_\_\_\_\_

VOLUME AND TYPE OF RELEASE (Cont., Intermittent): \_\_\_\_\_  
\_\_\_\_\_

POTENTIAL VOLUME TO BE RELEASED: \_\_\_\_\_  
\_\_\_\_\_

CONFIDENCE IN DATA (high, medium, low): \_\_\_\_\_

### CHARACTERISTICS OF SPILLED OIL

OIL TYPE/NAME: \_\_\_\_\_

SPECIFIC GRAVITY: \_\_\_\_\_ FLASH POINT: \_\_\_\_\_

POUR POINT: \_\_\_\_\_ VISCOSITY: \_\_\_\_\_

%AROMATICS: \_\_\_\_\_ %SATURATES: \_\_\_\_\_

%ASPHALTENES: \_\_\_\_\_

### WEATHER AND WATER CONDITIONS/FORECAST (48HR)

WATER TEMP: \_\_\_\_\_ AIR TEMP: \_\_\_\_\_

CURRENT INFO: \_\_\_\_\_ WIND SPEED: \_\_\_\_\_

SALINITY: \_\_\_\_\_ WIND DIRECTION: \_\_\_\_\_

WATER DEPTH: \_\_\_\_\_ SEA STATE: \_\_\_\_\_

TIDE INFO: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## **APPENDIX IV SHORELINE CLEANING AGENTS**

### **BACKGROUND**

Chemical agents applied to shorelines generally are designed either to prevent adherence (stranding) of oil or to release already stranded oil. The efficiency of mechanical cleanup operations may be enhanced by the use of shoreline cleaning agents by assisting with the refloating of oil or preventing its subsequent stranding. While the use of chemical cleaning agents may be appropriate under proper circumstances, certain limitations must be recognized. The potential for toxic responses in indigenous fauna or flora to the cleaning agent must be considered. As compared to dispersants, in which the chemical agents are immediately diluted upon addition to the water surface, shoreline cleaning agents often remain undiluted for prolonged periods of time and consequently can have a greater impact upon the indigenous biological and geological resources.

### **REGIONAL PHILOSOPHY**

The primary objective of oil spill abatement and cleanup is to reduce the effect of spilled oil on the environment. Mechanical recovery and cleaning techniques are preferred over the use of chemical cleaning agents. However, mechanical recovery may be limited by equipment capability, weather and spill magnitude.

### **GUIDELINES**

The NCP, Section 300.910, authorizes the use of chemical agents to respond to discharges of oil. Figure G-IV-1 is a list of state approved dispersants and the EPA Product Schedules. The following guidelines consolidate existing Federal and State policies and streamline the approval process without jeopardizing proper environmental consideration of the use of shoreline cleaning agents.

#### **(A) DECISION PROCESS**

The OSC shall adhere to the following:

##### **(1) ZONE 1**

By definition, shoreline cleaning agents would be considered for use on oil stranded on shorelines. The OSC shall obtain approval from the EPA and State representatives to the RRT and the Natural Resource Trustee(s).

##### **(2) DOCUMENTATION/TECHNICAL ASSISTANCE**

EPA, State of California, DOI, and DOC will each have a representative available to coordinate data collection and interpretation and to consult with the OSC.

##### **(3) AUTHORIZED CHEMICAL AGENTS**

Only chemicals listed on the NCP Product Schedule and approved for use in compliance with Article Three (sections 2332 through 2336) of California Code of Regulation, Title 23, may be considered for use. Shoreline cleaning agents must be clearly labeled and licensed for this specific use. OSCAs categorized as dispersing agents cannot be applied to the shoreline [Article Three (Section 2332) of the California Code of Regulations, Title 23], and therefore cannot be used as shoreline cleaning agents.

#### **(4) MONITORING**

The application process and results must be recorded visually. This can be accomplished using film or video footage made from the shore or from the air. Visual observations can also be made by a trained observer. Filming should be done without causing delay to the shoreline cleaning agent application.

## RESOURCES AT RISK

ENDANGERED/THREATENED SPECIES \_\_\_\_\_  
\_\_\_\_\_

MARINE MAMMALS \_\_\_\_\_  
\_\_\_\_\_

AVIAN SPECIES \_\_\_\_\_  
\_\_\_\_\_

SHELLFISH \_\_\_\_\_  
\_\_\_\_\_

FINFISH \_\_\_\_\_  
\_\_\_\_\_

SOCIOECONOMIC \_\_\_\_\_  
\_\_\_\_\_

HUMAN HEALTH EFFECTS \_\_\_\_\_  
\_\_\_\_\_

OTHER RESOURCES \_\_\_\_\_  
\_\_\_\_\_

SPECIFIC COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**DETERMINATION OF RRT**

**SSC RECOMMENDATION TO THE RRT/OSC:**

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**DECISION OF THE RRT**

DO NOT USE ALTERNATIVE CLEANUP TECHNOLOGY: \_\_\_\_\_

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INITIATE TEST APPLICATION: \_\_\_\_\_

USE IN LIMITED OR SELECTED AREAS: \_\_\_\_\_

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USE TO THE MAXIMUM EXTENT POSSIBLE: \_\_\_\_\_

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OTHER: \_\_\_\_\_

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**DECISION MAKERS:**

**NAMES**

**DATE/TIME**

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**ATTACHMENTS:**



The following information has been provided by the State of California. It lists the companies and their products that have been licensed for use within the state. However, any product, licensed or not, must be approved for use on a case-by-case basis. The procedures to follow for requesting the use of any chemical countermeasures are contained in this Annex.

### **CALIFORNIA LICENSED OIL SPILL CLEANUP AGENTS: AS OF APRIL 1994**

<u>Company</u>	<u>Name of Product and License Expiration Date</u>	<u>Type of Product</u>
A.S.I. 855 W. Walnut Street Compton, CA 90220	SPC Oil Sorbent 5/1/98	Collecting
Absorbent Systems, Inc. 508 East E Street Wilmington, CA 90744	Valdez Pillow 2/1/97	Collecting
Absorption Corporation 1051 Hilton Avenue Bellingham, WA 98225	Absorbent W 4/1/98	Collecting
Albert Gabrick 2118 Tree Ridge Circle Brea, CA 92621	Alsocup 7/1/98	Collecting
Conwed Corporation P.O. Box 357 Riverside, NJ 08075	Conwed Oil Sorbers 9/1/95	Collecting
Dutch Pride Products P.O. Box 1651 Cottonwood, AZ 86326	ECO/ 11/15/95	Dispersant
Exxon Chemical Company 821 Stedman Street Houston, TX 77029	Corexit OC-5 9/1/95	Collecting
	Corexit 7664 9/1/95	Dispersant
	Corexit 9527 9/1/95	Dispersant
General Technologies Application, Inc. 7720 Mason King Court Manassas, VA 22110	Elastol 5/1/97	Collecting
HAZ-MAT Response Technologies, Inc. 5891 Box Canyon Road La Jolla, CA 92037	Rubberizer 7/1/98	Collecting